

Industrial Standardization

and Commercial Standards Monthly



November

*See Page 273 for Article on
Standardization of Office Equipment*

1939

Who Is Who in Government Standardization

BECAUSE so many of our members have been asking what is what in government standardization work, we have asked Mr. J. H. Courtney, our Washington representative, to collect the facts about government agencies new and old, and the relations between departments and bureaus. This appears in the chart of the Federal government, pages 280 and 281.

The chart indicates the broad relationships between Administrations, Boards, Divisions, Bureaus, and the new establishments with the alphabetical names. It shows which of these work under the Department of State, which under the Department of Agriculture, and which are set up directly under the executive arm. It lists independent offices and establishments, showing who reports to whom.

Furthermore, and this of great importance to business, the chart shows the governmental groups that issue specifications for government purchases, which yearly run into hundreds of millions of dollars—and who issue standards for the use and the protection of the public and for industry.

Fifty of these governmental groups are cooperating in the development of national industrial standards through the American Standards Association—in the development of national industrial safety codes—and in the work on national building codes, traffic standards, and codes for the prevention of occupational diseases, all of which is going forward today as a joint concern of both governmental and industrial groups.

In this work government and industry have found a way of operating to their mutual advantage. The proof is 400 American Standards which are in wide use throughout the country.

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ASA Member-Bodies

Am. Gas Association
Am. Home Economics Assn.
Am. Institute of Bolt, Nut & Rivet Mfrs.
Am. Institute of Elec. Engineers
Am. Iron & Steel Institute
Am. Petroleum Institute
Am. Soc. of Civil Engineers
Am. Soc. of Mechanical Engineers
Am. Soc. for Testing Materials
Am. Transit Association
Am. Water Works Association
Assn. of American Railroads
Automobile Mfrs. Assn.
Cast Iron Pipe Research Assn.
Copper & Brass Mill Products Assn.
Electric Light and Power Group:
Assn. of Edison Illuminating Companies
Edison Electric Institute
Federal Housing Administration
Fire Protection Group:
Associated Factory Mutual Fire Insurance Companies
Nat. Bd. of Fire Underwriters
Nat. Fire Protection Assn.
Underwriters' Laboratories, Inc.
Institute of Radio Engineers

Mfrs. Standardization Soc. of the Valve and Fittings Industry
Nat. Assn. of Mutual Casualty Companies
Nat. Conservation Bureau
Nat. Electrical Mfrs. Assn.
Nat. Machine Tool Builders' Assn.
Nat. Retail Dry Goods Assn.
Nat. Safety Council
Outdoor Advertising Assn. of America, Inc.
Photographic Manufacturers Group:
Agfa Ansco Corporation
Eastman Kodak Company
Soc. of Automotive Engineers
Telephone Group:
Bell Telephone System
U. S. Department of Agriculture
U. S. Department of Commerce
U. S. Department of the Interior
U. S. Department of Labor
U. S. Govt. Printing Office
U. S. Navy Department
U. S. War Department

Associate Members

Am. Association of Textile Chemists and Colorists
Am. Automobile Association
Am. Council of Commercial Labs.

Am. Gear Mfrs. Association
Am. Hospital Association
Am. Institute of Architects
Am. Soc. of Heating & Ventilating Engineers
Am. Soc. of Refrigerating Engrs.
Am. Trucking Assns., Inc.
Anti-Friction Bearing Manufacturers Association, Inc.
Asphalt Shingle & Roofing Inst.
Assn. of Iron & Steel Engrs.
Associated Gen. Contractors of Am.
Brick Mfrs. Assn. of N. Y.
Grinding Wheel Mfrs. Association
Gypsum Association
Heat Exchange Institute
Illum. Engineering Society
Industrial Safety Equipment Assn.
Insulation Board Institute
Internat. Acetylene Association
Metal Lath Mfrs. Association
Modular Service Association
Nat. Elevator Manufacturing Industry, Inc.
Radio Mfrs. Association
Soc. of Motion Picture Engineers
Structural Clay Products Institute
U. S. Cap Screw Service Bureau
U. S. Machine Screw Service Bureau
U. S. Wood Screw Service Bureau

Company Members—Some 2,000 industrial concerns hold membership either directly or by group arrangement through their respective trade associations.

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**Standardization is dynamic, not static. It means
not to stand still, but to move forward together.**

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Standards for Office Equipment

by

E. B. Gage

*Supervisor of Office Equipment
Standards, Western Electric Co.*

THERE are as many fields in the office as in the factory where the principles of standardization can be made to pay dividends. To make effective use of these principles, however, office management needs the stimulus and coordinated study which the work of the American Standards Association has already made available to the factory. In some industries and commercial institutions, the offices have undertaken individual studies and have set "standards" both of physical things and of the less tangible procedures. Office management organizations, such as the American Management Association and the National Office Management Association, encourage interchange of experience and knowledge, but lacking the guidance and correlation of ASA thinking and planning in broad terms these efforts result principally in setting superficial and "local" standards, such as "which make of desk to use for what" and "what clips and pencils will prove the most economical," and perhaps a few others affecting, at the most, but one or a few businesses.

Back of all this is a broader view of standardization which is much more important and which, as yet, is practically virgin territory. I am not confused when selecting the best and most useful furniture *available* for office use, but I am perturbed when I consider how little any of us are doing to turn the thinking of manufacturers from meaningless terms such as "streamlining" toward useful ideals of fundamental design.

There is much service to be done in setting up standards of utility for material in the office.

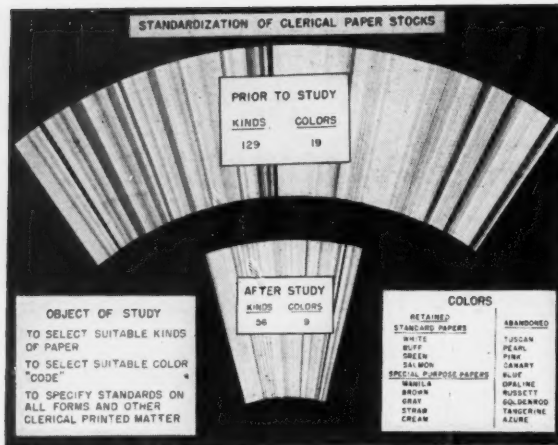
When a purchasing agent in industry orders wrought-iron pipe, for instance, he can refer to approved standards and order the size and weight of pipe he needs for different temperatures and

Standards engineer suggests that standardization procedure, already successful in the factory, would help office management in selecting more efficient office equipment, supplies, and methods

Mr. Gage's suggestions, as outlined in this article, were presented at the October 13 meeting of the ASA Company Member Forum

pressures. By using approved standards he knows that he will receive pipe which meets requirements for use and service agreed upon by both manufacturers and users. These standards give him a definition of the qualities he must consider in order to get material suitable for the purpose he has in mind.

The situation is different with office equipment. There are many grades and sizes of desks, tables, chairs, files—a greater variety than is required by industry and commerce. When an office manager buys a desk he has no standard to tell him what to look for. He may not realize until after he has had a desk delivered that it must be so many inches from the floor in order that a vacuum cleaner can be used under it. He probably does not know whether four legs or six legs or eight legs are needed. He may not be sure what size drawers or what length of desk is best suited to his purpose and most economical. He needs some standard to outline the definite objectives in economy and utility as well as in general appeal toward which he is working, to minimize the factors leading away from utility, and yet at the same time to provide the pleasing appearance generally required. Why should there not be American Standards for grades and sizes—eliminating the excessive number of sizes and styles, but al-



How Western Electric's standardization program reduced the number of paper stocks used by the company

lowing competition for development within reasonable limits?

Standards are not only needed for physical requirements of office equipment, but also for measuring production in office work. For instance, how would you measure typing output—on the square inch, the page, or the "key-struck" basis? How would you make allowance for single and double spacing, for different number of copies typed at one time, for simple, clear copy as opposed to difficult interlineated copy, for address and salutation in a letter? We should have standards to help define our objectives in office production, as well as standards for the physical factors of office equipment.

Beyond definitions and objectives come methods of attack. How should the job of standardization in the office be organized? In our company, we find one of the functions of the comptroller is "to effect establishment of company standards of office methods, equipment, and supplies and the coordination of departmental office developments."

Committee Guides Standards

As a means of carrying out this function, the comptroller has appointed an Office Equipment Standardization Committee. A chairman and a secretary are delegated from his departmental personnel; and other members represent each of the various operating departments, the Purchasing Department, and the Secretary's Department. The latter represents the various general staff units. There are also representatives from one associated and one subsidiary company. Although without direct representation, other subsidiary companies benefit from the decisions of this committee.

The duties of the committee are, briefly, "to

establish standards of office equipment and supplies for use by all departments of the company; to be responsible for the development of specifications for, and correlation of use of general forms; to keep informed currently concerning departmental and commercial use of developments of office equipment and supplies."

Standards Widely Circulated

Standards established by the committee are published in a catalog of Office Equipment Standards and circulated to all departments and associated and subsidiary companies. The committee also furnishes information concerning non-standard items recommended for use at particular locations or under special conditions.

It has been found expedient to organize three subcommittees composed of departmental staff members to deal specifically with studies of furniture, appliances, and supplies. These subcommittees have made studies of furniture, appliances, and supplies which have greatly increased our knowledge and ability to make more effective use of commercial items. They have also set up complete standards on furniture, such as desks and chairs; appliances, such as typewriters; adding and accounting machines; and supplies covering the entire field of materials used in the office.

The subcommittees carry on practical tests and laboratory experiments. They meet at frequent intervals to formulate definite recommendations to the Main Committee and to report on the status of uncompleted assignments. These recommendations and reports are in the form of minutes of meetings which are considered by the Main Committee at each meeting, usually held monthly. If recommendations are acceptable to the Main Committee, standards are established and made effective through publication in the catalog. Otherwise, recommendations are returned to the respective subcommittee for further action or consideration. Uncompleted items are considered, and comments, requests for special attention, and the like are given to the subcommittees.

Office forms, both those of a general nature (applicable to two or more departments) and those of a departmental nature (used in or useful to only one department) are considered of sufficient importance to warrant special attention independent of other items of office supplies.

A supervisor of form standards is responsible to the committee for setting up general standardization, and for design, suitable specifications and sample files, and necessary information relative to general forms. He also studies departmental forms, primarily to determine whether their design and physical specifications are in accordance

with the standards established by the committee and published in a form-design manual. As a by-product of such a study he calls attention to the possibility of simplification and improved utility and suggests combinations or elimination of forms for such action as is considered desirable or appropriate by the individual department affected. He also recommends general forms to replace individual departmental forms which have a common use or similar characteristics.

As a part of its catalog, the committee issues a "Reproduction Process Manual," dealing with various methods of reproducing office matter and the conditions under which they are applicable economically. The committee also sponsors the preparation and publication of a manual dealing with correspondence standards and related mailing practices.

Office Methods Coordinated

Office methods, that is, operating routines of this company, are established by the Methods Staffs of each Operating Department. Coordination, as may be necessary, is effected by agreement between departments involved. Generally, each Operating Department has a Headquarters Staff and each of the methods units is a part of an Operating Department staff. In some cases, branches of these staff organizations are located at remote points, such as in our manufacturing plants at Chicago, Kearny, and Baltimore. Under either form of control, routines involving local organizations are published and distributed to every unit of the company but only after agreement that the procedures are satisfactory.

Each Operating Department has its own series of instructions. General Staff Organizations, such as those of the Comptroller, Treasurer, and Personnel Director, issue "directions" which are mandatory for other organizations whenever necessary to carry out the policies and functions for which the executive staff officers are responsible. These directions are generally republished, with the addition of necessary and appropriate detail, as departmental instructions.

This method of attack has been reasonably successful over a period of years, although there is a need for greater coordination between departments, for standardization of the same or similar practices in different departments, and for eliminating duplicate effort on studies of office procedures and equipment.

The usual method of measuring results is by tabulating savings, and I find it relatively easy to credit to our standards work annual savings in the order of five to ten times the cost of doing the work. This seems worth-while without argu-

ment. Yet, I find myself asking such questions as these:

(1). What do other companies find is the best form of organization to accomplish the maximum results on an over-all company basis?

(2). Is it really necessary to have *company* standards or is it suitable to allow departments or locations to function independently—and if only partially so, to what extent?

(3). If company coordination is considered advisable, should there be a general staff officer assigned to head up a bureau of office standards and to cover all matters for all organizations?

(4). Should authority be assigned to designate standards on a mandatory basis or to present them merely as recommendations, leaving to constituent organizations the decision as to whether they will adopt and apply the recommendations? If the latter, what is considered the best means of selling the recommendations for voluntary adoption?

(5). Does form control represent a specific problem with other companies and how is this met? Is it considered better to have studies conducted and standards established and made effective through company lines of organization, or to employ consultants from outside sources to conduct studies and make recommendations?

(6). Do other companies find it expedient to have their own staff make studies and effect application of commercial office appliances; to allow (or encourage) engineers from suppliers of such equipment to conduct studies and make recommendations and installations; or to employ impartial consultants of commercial engineering concerns?

(7). If other companies find standardization within their own confines worth-while, how can broader objectives be defined which can influence our entire economic setup—get us from provincial to national treatment of questions and upgrade our entire office setup and procedure?

Facts Are Needed

We must emerge from the realm of speculation and opinion and deal with facts. In no place has there been so much opinion and so little fact as in the treatment of the office. Real engineers know stresses and strains; they take the trouble to isolate the facts—all of them—thus self-answering 90 per cent of their problems. We of the office have yet to learn these techniques and how to apply them to our problems.

Hence, it is my own idea that much might be accomplished if some nationally recognized organization could sponsor activity to deal with office standards on a country-wide basis, correlating the customers' and manufacturers' requirements much in the same way that American

Standards have been treated, and resulting in at least some standards which can be accepted by all.

As immediate suggestions for consideration the following could serve as a nucleus for the formulation of a program:

- (1). Environmental Standards
 - (a). Colors of decoration
 - (b). Illumination for various kinds of office work—dividing possibly into general and "spot" lighting
 - (c). Ventilation media and control
- (2). Procedural Standards
 - (a). As affecting employees, locker and washroom facilities, morning and afternoon "pauses" for general ventilation and refreshment
 - (b). Nomenclatures, such as standard methods of designating employees' names on records for procedures and operations
 - (c). Routines, such as reporting federal and state social security details and income taxes
 - (d). Preservation and destruction of records, including micro-photographic record procedures
- (3). Physical Standards
 - (a). Furniture—establishment of American Standards on size, to simplify the present wide range and to standardize general features of design and testing, and finishes and testing. When one examines the variety of sizes and grades of desks, filing cabinets, and other office furniture, it is easy to imagine the improvements that standardization can effect
 - (b). Appliances—standardization of type faces on machines which print results (adding machines, etc.), with simplification of sizes, spacing, and readability; standards of permissible noise level, of finishes, etc.
 - (c). Supplies—a wide field of opportunity for simplification of sizes (for binders and folders, etc.) and qualities offered
 - (d). Forms—standardization of typical forms for purchase, billing, and vouchering with standard locations for items of information; of sizes of forms considering economical production and filing; of paper stocks for varying periods of preservation and handling; of type styles for economic production and proper reference. An illustration of a start in this direction has been seen in tag and envelope industries.

Naturally, these and many other items must be considered carefully and either rejected tempor-

arily or permanently as impractical or placed on a planned program.

It may be possible that this whole idea is Utopian and impractical—that the great American ingenuity and our marvelous competitive system in this country would defeat the very purpose of the work. Yet, when I see accomplishments in the factory, I wonder.

Revision Changes Varieties Of Paper Cones and Tubes

A revision of Simplified Practice Recommendation R143-35, Paper Cones and Tubes (for textile winding), eliminating two varieties of paper cones, and adding three new varieties, has been accorded the required degree of acceptance by the industry, and became effective October 15, the Division of Simplified Practice, National Bureau of Standards, announces.

The recommendation, which will be identified as Simplified Practice Recommendation R143-39, establishes stock sizes of paper cones and tubes for winding yarns of asbestos, cotton, rayon, silk, and worsted, and for tire cords and thread.

Until printed copies are available, mimeographed copies may be obtained without charge from the Division of Simplified Practice, National Bureau of Standards, Washington, D. C.

ASA Annual Meeting December 13

The Annual Meeting of the American Standards Association will be held December 13 at the Hotel Astor, New York. As usual it will be a luncheon meeting, preceded by a meeting of the Standards Council in the morning and followed by the joint annual meeting of the Board of Directors and the Standards Council.

Richard H. Lansburgh of the Pennsylvania Economy League will speak on new trends and the economic and social significance of standardization. New officers will be announced and there will be brief reports of the year's activities by Edmund A. Prentis, president, and F. M. Farmer, chairman of the Standards Council.

Those wishing to make arrangements to attend the meeting can do so by writing in advance to the ASA.

ASA Forum Considers Office Standards and Methods of Statistical Analysis

METHODS of statistical analysis and how they can be applied to company standardization work were discussed by Dr. W. A. Shewhart of the Bell Telephone Laboratories at the morning session of the ASA Company Member Forum October 13. Problems of standardization of office equipment and supplies, presented by E. B. Gage of the Western Electric Company, were considered at the afternoon session. Twenty-eight representatives of 19 companies were present and took part in the discussion.

Dr. Shewhart explained the principles underlying the modern technique of detecting and eliminating causes of variation in the quality of manufactured products so as to secure control of that quality—that is, keep it within definite limits. He illustrated his talk with lantern slides. How the principles discussed by Dr. Shewhart are being applied in the manufacture of telephone equipment was illustrated by H. F. Dodge and W. W. Werring of the Bell Telephone Laboratories, who described some of the work being done. Examples showing how statistical methods are now being used in the textile, steel, and electrical industries were given by A. G. Ashcroft, of the Alexander Smith & Sons Carpet Company; Russell F. Passano, American Rolling Mill Company; and R. E. Wareham, General Electric Company.

The discussion of office equipment standardization presented by E. B. Gage (see pages 273 to 276

of this issue) resulted in appointment of an informal committee which is to investigate whether manufacturers and users of office supplies and equipment would be interested in having work on the standardization of office equipment and supplies started under the procedure of the American Standards Association.

The next meeting of the Forum will be held December 14. Subjects for discussion will be Marking of Metals for Identification and Allowances and Tolerances for Cylindrical Parts and Limit Gages.

The purpose of the Company Member Forum is to provide a medium for the informal exchange of ideas on the organization and work of a standards department in a company, to help ASA company members in solving their own standardization problems. The Forum's discussions are informal and no detailed record of the proceedings is kept. In the opinion of those taking part, this policy makes for the greatest possible freedom in the discussions and hence results in the greatest benefit to all concerned. It makes it necessary, however, for company standards' men to attend and participate in the meetings if they are to have the benefit of the Forum.

Any company member of the American Standards Association interested in the Forum and willing to take an active part in its discussions is invited to write the ASA for further information.

1939 Edition of ASTM Standards On Textile Materials

All of the specifications, tolerances, tests, and definitions developed by the American Society for Testing Materials through its Committee D-13 on Textile Materials are included in the 1939 ASTM Standards on Textile Materials, just published. The section on cotton is one of the major portions of the book with 21 items covering test methods for shrinkage, fastness to washing, general methods for testing cotton fiber properties, and cotton yarns and threads.

The work on wool is represented by ten standard specifications and methods covering hard scoured wool in grease wool, wool fineness, fiber length, wool tops (fineness) woolen yarn, worsted yarn, wool felt, wool and part wool fabrics, wool yarns mixed with other fibers, and pile floor covering.

The pamphlet also includes abstracts of papers presented at committee meetings. In the current issue there are five included in the Symposium on Spun Rayon and three more are papers presented at the Twenty-fifth Anniversary Meeting of the committee.

Nine sections are appended covering: photomicrographs of common textile fibers, yarn number conversion table, psychrometric table for relative humidity, and a glossary of terms relating to textile materials. Five proposed methods are published for information and comment on correction of breaking strength to standard regain, test for accelerated aging of textiles, quantitative analysis of textiles composed of wool and lanital, and test for shrinkage of grease wool.

Copies of this 320-page publication are available from the American Society for Testing Materials, 260 S. Broad Street, Philadelphia, at \$2.00 per copy in heavy paper cover.

ASA Approves Revised Petroleum Standards

EIGHT revised standards for petroleum products, submitted to the American Standards Association by the American Society for Testing Materials on behalf of the ASA Committee on Petroleum Products and Lubricants, have been approved by the ASA. Three tentative standards have been advanced to the status of American Standards, and one standard for petroleum products has been withdrawn. The standards were acted upon by the ASA committee following recommendations from Committee D-2 on Petroleum Products of the American Society for Testing Materials. The ASTM has the administrative leadership for the work of the ASA committee, which cooperates closely with ASTM Committee D-2. The following standards were revised:

- Method of Test for Cloud and Pour Points, American Standard (Z11.5-1939)
- Method of Test for Distillation of Natural Gasoline, American Standard (Z11.11-1939)
- Method of Test for Sulfur in Petroleum Oils by Bomb Method, American Standard (Z11.13-1939)
- Method of Test for Thermal Value of Fuel Oil, American Standard (Z11.14-1939)
- Method of Test for Carbon Residue of Petroleum Products (Conradson Carbon Residue), American Standard (Z11.25-1939)
- Method of Test for Gravity of Petroleum and Petroleum Products by Means of the Hydrometer, American Standard (Z11.31-1939)
- Method of Test for Burning Quality of Kerosene Oils, American Standard (Z11.17-1939)
- Method of Test for Color of Lubricating Oils, American Tentative Standard (Z11.34-1939)

Three standards were advanced from American Tentative Standard to American Standard:

- Method of Test for Knock Characteristics of Motor Fuels, American Standard (Z11.37-1939)
- Viscosity-Temperature Charts for Liquid Petroleum Products, American Standard (Z11.39-1939)
- Definitions of Terms Relating to Petroleum, American Standard (Z11.28-1939)

The American Tentative Standard Method of Test for Expressible Oil and Moisture in Paraffin Waxes (Z11.27-1932) was withdrawn on recommendation of the ASTM committee. The committee reported that the test does not give satisfactory results.

Single copies of the revised standards are available from the American Society for Testing Materials or the American Standards Association at 25 cents each.

All these standards, as well as other tests and specifications for petroleum products, are given in their latest approved form in the 1939 Report of Committee D-2 on Petroleum Products and Lubricants and Methods Relating to Petroleum

Products. The report is a compilation of 62 standard methods of test, 10 specifications, and two lists of definitions developed by ASTM Committee D-2. It includes a summary of the committee's activities in addition to new standards published for the first time covering carbon residue (Ramsbottom method), gum stability of gasoline, determination of tetraethyl lead in gasoline, and consolidated specifications covering ASTM thermometers.

This 350-page book is available from the American Society for Testing Materials, 260 S. Broad Street, Philadelphia, at \$2.00 per copy.

Color Council Recommends Standard Color Names

A standard terminology for colors for powdered drugs and chemicals and for whole crude drugs for use in the U. S. Pharmacopoeia has now been formally approved by the Inter-Society Color Council and recommended to the United States Pharmacopoeial Convention. The system, which is also now being studied for application to colors of opaque, nonmetallic surfaces, was developed by the Society's Committee on Measurement and Specification with the assistance of the American Pharmaceutical Association. It follows plans outlined originally in 1933 by D. B. Judd of the Colorimetry Section, National Bureau of Standards; K. L. Kelly, research associate of the American Pharmaceutical Association; and Dr. E. N. Gathercoal, first chairman of the Inter-Society Color Council.

In the new system the designation for all but very grayish colors consists of a hue name (red, green, blue, purple, etc.) preceded by appropriate modifiers (such as weak, moderate, strong, light, and dark). The designation for very grayish colors consists of a noun (white, gray, or black), with modifiers appropriate to the lightness and hue of the colors (such as dark reddish gray or yellowish white).

A complete discussion of the recommended color system is given in Research Paper RP1239 published in the September issue of the Journal of Research of the National Bureau of Standards. Separate copies of the paper, "Method of designating colors" by Deane B. Judd and Kenneth L. Kelly, are available from the Superintendent of Documents, Government Printing Office, Washington, D. C., at 10 cents each.

Liaison Representatives Named by ASA On Government Screw Thread Committee

FOUR men of outstanding importance and experience in problems of screw thread standardization and manufacture have been named by the American Standards Association, the American Society of Mechanical Engineers, and the Society of Automotive Engineers to serve as liaison representatives between the new Interdepartmental Screw Thread Committee and five ASA committees working on problems of screw thread standardization. They are:

Earle Buckingham, professor of mechanical engineering, Massachusetts Institute of Technology; secretary, ASA Committee on Standardization and Unification of Screw Threads (B1)

J. H. Edmonds, general manager, Lebanon Plant, Bethlehem Steel Company; member, ASA Committee on Bolt, Nut and Rivet Proportions (B18)

R. E. Flanders, president, Jones & Lamson Machine Company; chairman, ASA Committee on Screw Threads (B1)

A. M. Houser, standardization engineer, Crane Company; member, ASA Committee on Pipe Flanges and Fittings (B16)

The liaison will affect five ASA committees whose work is connected with screw thread standardization:

Screw Threads (B1)

Pipe Thread (B2)

Small Tools and Machine Tool Elements (B5)

Pipe Flanges and Fittings (B16)

Bolt, Nut and Rivet Proportions (B18)

The purpose of the new Interdepartmental Screw Thread Commission has been described by the Secretary of Commerce "to safeguard the interests of the Federal Government in the specification, purchase, and inspection of threaded products." It consists of two representatives of the Army appointed by the Secretary of War; two of the Navy appointed by the Secretary of the Navy; and two representatives appointed by the Secretary of Commerce. They are:

War Department—

Major George C. Kenney, chief, Production Engineering Society, Material Division, Wright Field, Dayton, Ohio

Harry B. Hambleton, Office of Chief of Ordnance, War Department, Washington, D. C.

Navy Department—

Commander Harry B. Slocum, U. S. Navy, Naval Gun Factory, U. S. Navy Yard, Washington, D. C.

Lieutenant-Commander Guy Chadwick, U. S. Navy, Bureau of Engineering, Navy Department, Washington, D. C.

Department of Commerce—

Dr. L. J. Briggs, Director, National Bureau of Standards, Washington, D. C.

H. W. Bearce, Co-Chief, Division of Weights and Measure, National Bureau of Standards, Washington, D. C.

Dr. Briggs is chairman and Mr. Bearce is secretary of the committee.

The committee's work will cover standards for screw threads, gages, dies, and taps, and bolts, nuts, screws, and other threaded parts. It is planned that standards developed by the committee will be published with an order making their use mandatory in the Departments of War, Navy, and Commerce after they have been approved by these departments.

The Federal Government and Standardization

THE chart on the following pages, showing the present organization of the Federal Government, contains the most recent information on the relationship of the Government bureaus, divisions, and departments to each other. It was prepared by J. H. Courtney, representative of the American Standards Association at the National Bureau of Standards, and was checked by the United States Information Service.

We have included for the information of our Members an analysis showing the sections of the Government interested in standardization. This analysis shows that seven departments and two other establishments are members of the American Standards Association, 47 establishments are taking part in the work of ASA technical committees, and 81 are issuing standards of their own. This last group was difficult to analyze, but the information shown on the chart represents the most complete analysis that could be obtained from the material available.

The chart is the third in a series of articles prepared at the specific request of industry concerning the activities of the Federal Government in connection with standardization. The first of the series, covering the U. S. Department of Commerce and the Federal Specifications Executive Committee, appeared in the July issue. The second, on the War and Navy Departments, was published in August. Another installment, on the Department of Agriculture, will appear in a future issue.

Single copies of the chart, to be mailed without folding, are available at 20 cents each from the American Standards Association, 29 West 39 Street, New York. Additional copies will be 10 cents each provided they are mailed to the same address. Special prices will be available for quantity orders.

GOVERNMENT OF THE

The Constitution

Executive

THE PRESIDENT

Legislative

THE CONGRESS
SENATE HOUSE

***GOVERNMENT PRINTING OFFICE
LIBRARY OF CONGRESS

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U. S. BOTANIC GARDEN

THE CABINET

Secy. of State	Secy. of Agriculture
Secy. of the Treasury	Secy. of Commerce
Secy. of War	Secy. of Labor
The Attorney Gen'l	Federal Security Adm.
The Postmaster Gen'l	Federal Works Adm.
Secy. of the Navy	Federal Loan Adm.
Secy. of the Interior	

DEPARTMENT OF STATE

Consular Commercial Office	Foreign Serv. Officers' Training School
Division of American Republics	Office of the Adviser on International
Division of Cultural Relations	Economic Affairs
Division of Current Information	Office of the Editor of the Treaties
Division of European Affairs	Office of the Legal Adviser
Division of Far Eastern Affairs	Office of the Philippine Affairs
Div. of Foreign Service Administration	Passport Division
Division of Foreign Service Personnel	Special Division
Division of International Communications	Translating Division
Division of International Conferences	Treaty Division
Division of Near Eastern Affairs	Visa Division
+ Division of Protocol	Related Organizations:
Division of Trade Agreements	The Comm. for Reciprocity Inform.
Foreign Service Buildings Office	Exec. Committee on Commercial Policy

DEPARTMENT OF THE TREASURY

Bureau of the Comptroller of the Currency	Legal Division
Bureau of Customs	Office of the Commissioner of Accounts
+ Bureau of Engraving and Printing	and Deposits
+ Bureau of Internal Revenue	Office Superintendent of Treasury Bldg.
Bureau of the Mint	Office of the Treasurer of the U. S.
Bureau of Narcotics	Processing Tax Board of Review
Committee on Enrollment and Disbarment	+ Procurement Division
Division of Appointment	+ Federal Specifications Exec. Comm.
Division of Monetary Research	Public Debt Service
Division of Tax Research	Secret Service Division
Federal Alcohol Administration	+ United States Coast Guard

** WAR DEPARTMENT

War Department General Staff	+ Office of the Chief of Engineers
Office of the Adjutant General	National Guard Bureau
Office of the Inspector General	Joint Army-Navy Boards
Office of the Judge Advocate General	The Joint Board
+ Office of the Quartermaster General	The Aeronautical Board
+ Office of the Chief of Finance	The Joint Economy Board
+ Office of the Surgeon General	Joint Army and Navy Munitions Board
+ Office of the Chief of Ordnance	Army War College
+ Office of the Chief of Chemical Warfare Service	Army Industrial College
Office of the Chief of Chaplains	United States Military Academy
Office of the Chief of Cavalry	Territorial Divisions of the Army
Office of the Chief of Coast Artillery	Panama Canal Zone
Office of the Chief of Field Artillery	Hawaiian Islands
Office of the Chief of Infantry	Philippine Islands
+ Office of the Chief of the Air Corps	Puerto Rico
+ Office of the Chief Signal Officer	+ The Panama Canal
	Arlington Memorial Amphitheater Comm.

DEPARTMENT OF JUSTICE

Administrative Division	Customs Division
Alien Property Bureau	Federal Bureau of Investigation
Antitrust Division	Federal Prison Industries, Incorporated
Board of Parole	Lands Division
Bond and Spirits Division	Office of the Assistant to the
+ Bureau of Prisons	Attorney General
Bureau of War Risk Litigation	Office of the Assistant Solicitor
Claims Division	General
Criminal Division	Office of the Solicitor General
	Tax Division

POST OFFICE DEPARTMENT

Office of the First Assistant Postmaster General	(Third Asst. Postmaster General--cont'd)
Div. of Post Office Service	Div. of Stamps
Div. of Air Mail Service	Div. of Registered Mails
Div. of Postmasters	Div. of Post Office Quarters
Div. of Dead Letters and Dead Parcel Post	Div. of Cost Ascertainment
Office of the Second Asst. Postmaster General	Div. of Parcel Post
General	Office of the Fourth Assistant Postmaster General
Div. of Railway Mail Service	+ Div. of Engineering and Research
Div. of Internatl. Postal Service	Div. of Post Office Quarters
Div. of Railway Adjustments	Div. of Motor Vehicle Service
Div. of Rural Mails	Div. of Topography
Office of the Third Assistant Postmaster General	+ Div. of Bldg. Operations & Supplies
Div. of Finance	Div. of Traffic
Div. of Postal Savings	Bureau of the Chief Inspector
Div. of Money Orders	Office of the Solicitor
+ Div. of Classification	Office of the Purchasing Agent
	Bureau of Accounts
	Division of Retirement Records
	Postal Savings System

FEDERAL SECURITY AGENCIES

+ Civilian Conservation Corps	In
National Youth Administration	+ So
Office of Education	Re
United States Film Service	
Radio Division	
+ Public Health Service	

** FEDERAL WORKS AGENCIES

Federal Fire Council	Fe
+ Public Buildings Administration	+ Pu
Office of Plan. & Space Control	+ Pu
Office Supervising Architect	+ Un
Office Supervising Engineer	+ Wo

FEDERAL LOAN AGENCIES

Disaster Loan Corporation	+ Fe
Electric Home and Farm Authority	
Export-Import Bank of Washington	
+ Federal Housing Administration	
Federal National Mortgage Assn.	Re

INDEPENDENT OFFICES AND ESTABLISHMENTS

American Battle Monuments Com.	+ In
+ Civil Aeronautics Authority	Me
+ Natl. Advisory Comm. for Aeronautics	
Commission of Fine Arts	
District of Columbia	
Federal Board of Hospitalization	
+ Federal Communications Commission	
Federal Deposit Insurance Corp.	
+ Federal Power Commission	
Federal Reserve System, Board of Governors of	
Federal Open Market Committee	
Federal Reserve Banks	
Federal Advisory Council	
+ Federal Trade Commission	
+ General Accounting Office	
International Boundary Commission	
U.S., Alaska and Canada	
International Boundary Commission	
United States and Mexico	
International Fisheries Commission	
United States and Canada	
International Joint Commission	
United States and Canada	

OF THE UNITED STATES

the Constitution

Executive

THE PRESIDENT

EXECUTIVE OFFICE OF THE PRESIDENT

The White House Office
Bureau of the Budget
Central Statistical Board
National Resources Planning Board
Office of Government Reports
Division of Press Intelligence
United States Information Service
The Liaison Office for Personnel Management
Related Organization:
Council of Personnel Management

culture
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ity Adm.
Adm.

FEDERAL SECURITY AGENCY

Interdepartmental Comm. to Coordinate Health & Welfare Activities
+ Social Security Board
Related Organization:
Committee on Economic Security

FEDERAL WORKS AGENCY

Federal Real Estate Board
+ Public Roads Administration
+ Public Works Administration
+ United States Housing Authority
+ Work Projects Administration

FEDERAL LOAN AGENCY

+ Federal Home Loan Bank Board
Federal Home Loan Bank System
+ Home Owners' Loan Corporation
Fed. Savings and Loan System
Fed. Savings & Loan Ins. Corp.
Reconstruction Finance Corporation
The RFC Mortgage Company

OFFICES AND ESTABLISHMENTS

+ Interstate Commerce Commission
Maritime Labor Board
Mixed Claims Commission United States and Germany
National Academy of Sciences
National Research Council
National Capital Park and Planning Commission
National Labor Relations Board
National Mediation Board
Pan American Union
Railroad Retirement Board
+ Securities and Exchange Commission
Smithsonian Institution
+ Tennessee Valley Authority
The American Red Cross
The National Archives
United States Board of Tax Appeals
+ United States Civil Service Comm.
+ U.S. Employees' Comp. Comm.
+ United States Maritime Commission
United States Tariff Commission
+ Veterans' Administration
Washington Natl. Monument Society

Judicial

SUPREME COURT.

CIRCUIT COURTS OF APPEALS OF THE UNITED STATES
DISTRICT COURTS OF THE UNITED STATES
UNITED STATES COURT OF CUSTOMS AND PATENT APPEALS
COURT OF CLAIMS OF THE UNITED STATES
UNITED STATES TERRITORIAL COURTS
UNITED STATES CUSTOMS COURT

** DEPARTMENT OF THE NAVY

Office of the Secretary
Office of the Assistant Secretary
Office of the Assistant Secretary for Aeronautics
Office of the Chief of Naval Operations
+ Bureau of Yards and Docks
+ Bureau of Navigation
Naval Observatory
Hydrographic Office
+ Bureau of Ordnance
+ Bureau of Construction and Repair
+ Bureau of Engineering
+ Bureau of Supplies and Accounts
+ Bureau of Medicine and Surgery
+ Bureau of Aeronautics
Office of the Judge Advocate General
+ Headquarters United States Marine Corps
Joint Army-Navy Boards

** DEPARTMENT OF THE INTERIOR

General Land Office
+ Bureau of Reclamation
+ Geological Survey
+ Division of Grazing
+ Bureau of Mines
+ Office of Indian Affairs
+ National Park Service
+ Bureau of Fisheries
+ Bureau of Biological Survey
Petroleum Conservation Division
Div. of Territories and Island Possessions
Puerto Rico Reconstruction Administration
Bituminous Coal Division
Director of Forests
Office of the Solicitor
Eleemosynary Institutions
Columbia Institution for the Deaf
Freedmen's Hospital
Howard University
St. Elizabeth's Hospital
Division of Information
Division of Investigations
United States Board on Geographic Names
Bonneville Project
Related Organizations:
Federal Board of Surveys and Maps
Migratory Bird Conservation Commission
National Park Trust Fund Board
National Power Policy Committee

** DEPARTMENT OF AGRICULTURE

+ Agricultural Adjustment Administration
+ Bur. of Agricultural Chemistry and Engineering
+ Bureau of Agricultural Economics
Agricultural Marketing Service
+ Bureau of Animal Industry
Commodity Credit Corporation
Commodity Exchange Administration
+ Bureau of Dairy Industry
+ Bureau of Entomology and Plant Quarantine
+ Farm Security Administration
Federal Crop Insurance Corporation
Federal Surplus Commodities Corporation
+ Food and Drug Administration
+ Forest Service
+ Bureau of Home Economics
Division of Marketing and Marketing Agreements
+ Bureau of Plant Industry
+ Rural Electrification Administration
Soil Conservation Service
Sugar Division
+ Weather Bureau
Extension Service
Office of Experiment Stations
Office of Information
Farm Credit Administration
Federal Land Banks
Federal Farm Mortgage Corporation
Federal Intermediate Credit Banks
Production Credit Corporations and Associations
Banks for Cooperatives
Cooperative Research & Service Div.
Regional Agricultural Credit Corp.
Federal Credit Union System

** DEPARTMENT OF COMMERCE

+ Bureau of the Census
+ Coast and Geodetic Survey
+ Bureau of Foreign & Domestic Commerce
Inland Waterways Corporation
+ Bureau of Marine Inspection and Navigation
+ National Bureau of Standards
Patent Office
Business Advisory Council
Related Organizations:
Foreign Trade Zones Board
Textile Foundation, Inc.

** DEPARTMENT OF LABOR

+ Bureau of Labor Statistics
+ Children's Bureau
+ Division of Labor Standards
Immigration & Naturalization Service
Public Contracts Division
United States Conciliation Service
Wage and Hour Division
+ Women's Bureau

+ Issues standards or good practice recommendations.

* Cooperating in ASA committee work.

** Member of American Standards Association.

Safety for Latin-America

by

P. K. Stiles

*Executive Manager, Inter-American
Safety Council, Inc.*

ALTHOUGH safety, including prevention of accidents in the home, on the highways, and in industry, has long been one of the foundations of business policy in the United States, it is only recently that any attempt has been made to coordinate efforts started time and again in different localities in the other Americas. It would seem that the general thought in those countries has been to accomplish by legislation what has been done in the United States by education first, and by compulsory legislation only after the most thorough trials. In many cases the laws of the Latin American countries make the prevention of accidents obligatory and establish heavy penalties for lack of compliance with these provisions.

The Inter-American Safety Council, Inc., was founded with the desire that it might become the hub of the safety movement in Latin America. It is an association composed of organizations and individuals working earnestly to reduce the number and seriousness of all kinds of accidents.

In 1935 the first effective Safety Council in Latin America was organized in the Republic of Cuba under the name of Consejo Nacional para la Prevencion de Accidentes. This Council has continued its program of safety work for the past three years and has brought about a definite interest in accident prevention on the part of Cuban industry and agriculture, as well as on the part of the public authorities and the mass of the Cuban public.

This Cuban Council was originally sponsored by F. D. Mahoney, as president of the Cuban Electric Company, and had as its first president A. G. Mendoza, in charge of the Cuban operations of the American Sugar Refining Company. Today the President of the Council is Leopoldo

A program of accident prevention, now going forward in Cuba, Venezuela, Ecuador, Panama, Costa Rica, Guatemala, and Mexico, is making use of advice and cooperation from national organizations working on safety in the United States

American Standard safety codes are consulted by the Inter-American Safety Council for use in its program

Casas, General Supervisor in Cuba for the National City Bank of New York. The membership of the Council comprises some 450 groups and its income reached some \$14,000 in 1937.

Numerous safe practice pamphlets covering individual trades or industrial activities, rule books, manuals for persons in charge of safety work, clip sheets for newspaper editors, and scores of pamphlets, reprints, memoranda, and news releases on special safety subjects, are being issued.

This information is presented to the members and others in various ways, sometimes in the form of a graphic poster, or even in an elaborate plan for the prevention of accidents throughout an entire industry. The Council will also make, and help others to make, special investigations, such as city traffic surveys; studies of new hazards in industry, mine, and home; calculations of the effect of Drivers' License Laws on automobile accidents; and analyses of occupational diseases.

A great deal of this material has been secured by the Inter-American Safety Council, Inc., through the cooperation of such organizations as the American Standards Association, the American Petroleum Institute, and the National Safety Council.

American Standard Safety Codes, especially

those covering ladders, rubber goods, and tests for many different products are now being used by members of the Inter-American Safety Council in the various Latin-American countries.

The adoption of all American Standard safety codes will, in all instances, be urged by the Inter-American Safety Council.

The men who have assumed this burden represent a varied group. The Board of Directors and the Board of Sponsors are composed of business executives, diplomats, members of the Bar, engineers, educators, insurance consultants, and others drawn from similar professions and groups.

The president of the Inter-American Safety Council, Inc., is James S. Carson, vice-president of the American & Foreign Power Company, one who has long been associated with Latin-American affairs. Dr. M. H. Zepeda, a prominent Latin-American educator, jurist, and diplomat, is a vice-president. F. D. Mahoney, also a vice-president of Inter-American, was responsible for the successful results of the first public utility safety program in Latin America and is a well-known industrial executive.

The Council has within itself, therefore, the necessary broadness of experience and viewpoints to cover the many different aspects of the task which lies before it.

The foundation has been laid for the Council's work and it can already look upon very important results. For the first time in history, safety committees have been appointed in various of the Central and South American Republics, composed of representatives of industry, education, government, and other groups. These representatives have assumed the burden of carrying out in their communities the accident prevention program so necessary to reduce the human suffering and economic loss taking place in every industrial country today.

Venezuela, Ecuador, Panama, Costa Rica, Guatemala, and Mexico are very actively participating in this work. In these countries Safety Committees selected from prominent members of each community Rotary Club are active. These

committees have not followed any particular pattern. In Venezuela, for example, the government is represented by a member of the Foreign Relations Department and the executives of local banks. In Panama, the Secretary of Justice and Government has taken the lead. In Ecuador, the automobile interests have shown more active participation. In Costa Rica, the local Red Cross organization is most interested. This indicates that what is being done as ground work has rested primarily on the will of those in each country who wish to undertake a real portion of the work. Cuba, as stated, has long since been carrying out a broad and ambitious program which has borne much fruit both from the viewpoint of better industrial accident ratios and reduced compensation insurance rates.

At the present time the Inter-American Safety Council, Inc., is actively engaged in preparing a program which will have as its main objective the educational phase of the problem. For this purpose, it is hoped that arrangements can be made during the current year for representatives of the various police forces to attend the Northwestern University Traffic Officers School. Dr. Miller McClintock, director of the Bureau of Street Traffic Research of Yale University, has given students from Latin America a warm invitation to attend his courses. New York University's Safety Center is also to be open to those prepared to make profitable use of its program. These sections of the program are now being prepared for definite action by all of those interested.

The Inter-American Safety Council, Inc., has included in its scope the dissemination of specific information regarding accident prevention equipment and standards of construction, materials, and operations, all directed toward one end: That human activity may be made safer from those hazards, either human or mechanical, which today cause the imposition on all of us of a tremendous accident burden, totally unnecessary. This burden can be controlled promptly and eliminated eventually by the successful completion of a program such as the one sponsored by the Inter-American Safety Council, Inc.

Experts of Nine States Seek Standard Rules for Milk

Adoption of "adequate and reasonably uniform quality and inspection standards" by nine Midwestern and Southern milk-producing States, designed to overcome restrictions to the marketing of sweet cream and condensed and evaporated milk for manufacturing purposes in other States,

was urged at a regional dairy conference October 7.

The conference of dairy experts was called by the council of State governments. Standardization of the varying sanitary regulations was the primary object of the meeting, which was attended by representatives from Illinois, Indiana, Iowa, Kentucky, Michigan, Minnesota, Ohio, Tennessee and Wisconsin.

Bureau of Home Economics Reports On Study of Children's Sizes

A REPORT on the measurement of 147,088 boys and girls, carried out by a Works Progress Administration research project sponsored by the U. S. Bureau of Home Economics, has just been published with tables showing how the measurements are correlated, and including a standard system of body measurements proposed as a basis for sizing children's garments.

The project was undertaken because of the present confusion in sizes based on age. It is the first time a scientific study of actual body sizes has been made. Thirty-six measurements, chosen after consultation with retailers, and garment and pattern manufacturers, were made on each child. The methods used are described in the report.

Body Measurement Studied

After the measurements were taken they were compiled and studied to find the measurement or combination of measurements which best predicts the other dimensions of a child's body. Eighteen important body measurements in addition to age and weight were selected for study. The correlation coefficient—an index which measures the closeness with which one measurement can be predicted from another—was calculated for the 190 possible pairs of the 20 items, and the results are shown in tables in the report.

"Essentially, the problem of sizing garments is one of finding that measurement or combination of measurements which best predicts the other dimensions of a child's body," the report says in explaining the purpose of the study. "This is especially true when what is required is the creation of a representative form or model upon which standard garments may be manufactured. It follows, therefore, that the best choice is that measurement or combination of measurements which is most closely related to the greatest number of others, provided, of course, it also satisfies the further criterion of being practicable."

It was found that one measurement alone was not enough to explain the variation of all the other measurements, so an analysis was undertaken to determine which combination of two measurements would best predict the other measurements of the set. The tables (included in the report) showed that the best predictor of both girths and lengths is a girth in combination with a length. Then it was necessary to determine which length and which girth to choose as the guide.

"When a child's height is known," the report

continues, "his other lengths can be predicted fairly accurately. For example, if a boy's stature is known, his hip height, waist height, arm length, and other lengths can be predicted with a variation of less than one inch on the average. The same holds true for girls. . . .

"However, the problem of which measurement to choose in order to predict the girths is slightly more complicated. The statistical analysis shows that the best predictor of all girths and lengths is either a combination of height and weight, or height and hip circumference. A poorer, but possible, combination is height and chest girth."

For this reason the report includes a system of body measurements as a basis for sizing children's garments, using hip girth and height as the two determining measurements. Small figures on the charts represent the number of children measured who had a stature and hip measure equal to the sizes shown. The Bureau of Home Economics is recommending this system for consideration by the industry. Members of the ASA Committee on Standardization of Sizes of Children's Garments, whose work has been based largely on the Bureau's research work, have been asked by the committee to present the proposal to their industries. They are expected to report their findings at the next meeting.

The present report is a preliminary one which summarizes the results of the study. It was prepared by Ruth O'Brien, chief, and Meyer A. Girshick, associate statistician, of the Textiles and Clothing Division, U. S. Bureau of Home Economics. A complete technical report of the study is now in preparation and will be issued later.

Copies of the present report may be obtained by addressing the U. S. Bureau of Home Economics, Washington, D. C.

French Bus Dashboards Show Standard Symbols

"The Bureau of Standards for the French motor industry has established universally understandable symbols for the control buttons on bus dashboards, so that now not even a Moor from the colonies would have to fumble before driving away. Horn button—picture of a horn; starter button—spiral arrow; bright lights—a sun; dim lights—a half-sun; ignition—a lightning flash."

—*Business Week*, October 28.



All the standards prepared by committees of the Society of Automotive Engineers are made available through the SAE Handbook

SAE Standards Mark Progress of Industry

by

John A. C. Warner

*Secretary and General Manager
Society of Automotive Engineers*

THE word "standard" implies, to those not familiar with standardization, something fixed and immutable. The very fact that a standard is an accepted measuring stick to which other comparable things can be related strengthens the implication that it is static.

The standards created by the Society of Automotive Engineers are anything but static, fixed, or immutable, and it is necessary to stress this

point as a preface to any explanation of the Society's standards program.

From the very outset of standards activities, which began in 1910, we of the Society have promulgated the idea that a standard must be flexible if it is to meet adequately the needs of industry. We view it as a guide-post to point out the best practice of the moment; but, as quickly as a practice advances, the standard is revised.

Sometimes satisfaction is taken that a standard has survived unchanged over a long period of time. But, actually, life duration has practically no significance. Long life may indicate wisdom in the formulation of a standard, but it is quite as likely to reflect slow progress in an industry. Periodic revisions, on the other hand, are a sure sign of vitality; they indicate either that the practical quality is being maintained through alertness as to needs, or that practice within industry is changing rapidly. They may, on occasion, indicate that both things are happening.

The Society of Automotive Engineers is a Member-Body of the American Standards Association. F. K. Glynn, its representative on the Standards Council, casts the SAE vote on all questions of final approval of standards, initiation of projects, and ASA committee membership.

Eleven ASA technical committees carry on their work on development of standards under the leadership of the SAE, and SAE representatives take an active part as members of 28 additional committees.

SAE representatives are also members of two of the general administrative industry committees of the ASA—the Mechanical Standards Committee and the Highway Traffic Standards Committee—and as such have a voice in ASA standardization policies in those fields.

The term "standard" may connote a measure of quality. In the main, however, SAE standards do not establish quality—they cover only quantitative and dimensional characteristics.

The quality of flexibility always has been of major importance in SAE standards and it is, no doubt, responsible for the long life and steady expansion of the Society's work. Certainly this attribute had a great deal to do with overcoming resistance to the standards idea when the first steps were taken in 1910. At that time there was a great deal of hesitancy to go along with the movement, because manufacturers thought competitive advantage would be lost and design would be "frozen" to stay progress. Once these fears were allayed—and they were not banished overnight—a force was set in motion which has never spent itself.

It can be seen very readily that the concept of motion means that standards work is never done. Every standard which is set is subject to revision and there is constant growth through the undertaking of new projects. On at least two occasions, other organizations have requested their absorption by the SAE and their standards work, coupled with needs arising from advances in motor vehicle design, has increased the volume of projects substantially.

When standards work was first undertaken by

the Society, an organization was set up which comprised 16 divisions, each representing specific projects. Today there are 21 divisions, but there has been much greater growth than is indicated by the addition of five divisions. The present divisional organization represents groupings of activities rather than specific projects, and specific work is handled by subdivisions formed especially for the purpose. We have in this arrangement a very flexible type of organization. The divisions remain fairly permanent in form, while the subdivisions are organized to meet the needs of the moment and dissolved when the need has been met. Likewise, pruning is automatic so that only live units are retained. The actual number of projects being handled at any given moment ranges from 100 to 200.

The organization which handles standards work is a very closely linked one. The personnel of the various committees is appointed by the president of the Society. The General Standards Committee, which watches over all the work, comprises a general chairman and the chairmen of the divisions. Each division has a chairman, vice-chairman, and as many members as are required to do the necessary work.

It is the duty of this organization to carry out standards work, but not to initiate it. The demand for standardization comes from the industrial firing-line where the need arises. This means that practice is fairly well defined before there is any attempt at standardization. In our opinion, the pre-standard practice period is highly important because it bears upon the practical nature of the standard which is to be evolved. It is the obligation of those who approve standards projects to know when to go ahead and when to hold back. If a standard is formulated too early, it may hamper future development; if it is delayed too long, there will be a loss in value to industry. We hold that the thoroughly workable, practical standard must be developed from the experience which divergent practice provides.

Experts on General Committee

Our General Standards Committee passes upon all standards work, and when the Society Council says the final word the standard comes into official being. This plan of stamping approval has been in effect for the past ten years. Prior to that time the approval came through a vote of all the members of the Society. On the face of it, the earlier practice would seem to be the more desirable, but in actual accomplishment it was far from satisfactory. The General Committee, being composed of carefully picked experts, knows what the problem is and the objective being sought. It meets twice a year to review the

work of the organization, so that the Council can act, and publication of the approved standards can be made in the Spring. The complete compilation appears in the *SAE Handbook*, which is probably too well known to need comment.

Society standards work is by no means limited to projects arising within the automobile industry. A substantial volume of work is carried on in cooperation with other organizations and committees, and because this work involves problems allied to the automotive industry it may be carried on without involving the entire membership. In cases of this kind where the major concern centers elsewhere, the Society does not sponsor the projects but merely cooperates.

Naturally, an industry as large as the automotive industry impinges upon many others, and this gives rise to inter-industry standards work in which the Society functions through the American Standards Association. International standards work is handled in a similar cooperative manner.

It has been our experience that the success of standardization is no more than a reflection of committee personnel. Men make the standards and men comprise the membership. For this reason, very serious consideration is given to the choice of men to serve on the various committees. Actually, more consideration must be given to committee personnel than to the choice of men

SAE standards, many of which have been given approval as American Standards by the American Standards Association, are used throughout the automotive and associated industries, and in products of other industries where they apply.

Fifty-seven new and revised standards for aircraft, ball bearings, storage batteries, lighting, and non-ferrous metals are published in the 1939 *SAE Handbook*.

Total number of SAE standards and recommended practices is 168, developed under the supervision of 18 SAE Divisions—for aircraft, aircraft engines, axle and wheels, ball and roller bearings, Diesel engines, electrical equipment, gasoline engines, iron and steel, lighting, lubricants, motor coach and motor trucks, non-ferrous metals, parts and fittings, passenger cars, production, screw threads, tractor and equipment, and transportation.

for administrative duties. We can't find men too good for standards work and so the best engineers are drafted for it. It is their vision and their labor which has made every standard a living thing and the accumulated work something of which the Society feels justly proud.

Steel Industry Saves Through Standardization

"Experience in the matter of standardizing products, insofar as it has gone, has shown desirable results. . . . Structural sections, particularly the wide flange beams, have been standardized so that the respective members of the geometric series, although produced by different companies, are interchangeable. The vast savings and convenience accruing to the users of structural steel, as a result of these measures, are most pronounced.

"In addition, the standard dimensions which provide for all engineering requirements, without appreciable gaps, make for economy in production. It is probably safe to say that 90 per cent of the structural steel and plate now produced is manufactured under not more than ten different specifications, and further that approximately 75 per cent of the structural steel is produced under two specifications. A similar story may be told of the growth in the use of steel sheet piling, which was limited and costly until the importance of standards was understood. When standards for steel piling designs were developed, after careful

engineering analysis, to be the most efficient designs, the use of steel piling increased by leaps and bounds."—*Benjamin F. Fairless, president, United States Steel Corporation, at the forty-eighth general meeting of the American Iron and Steel Institute, May 25.*

Motion Picture Medal For Dr. L. A. Jones

Dr. Loyd A. Jones, of the Eastman Kodak Laboratories, chairman of the ASA Committee on Standardization in the Field of Photography, was awarded the annual progress medal by the Society of Motion Picture Engineers October 19. The citation for the award mentioned Dr. Jones' studies of photographic processes and his contributions to precision in photographic terminology and said that Dr. Jones had "conducted and published many extensive investigations in the field of photometry, physical optics, illumination, colorimetry, physics of photography, visual sensitometry, and motion picture engineering."

ASTM Activity Brings ASA Approval To Many 1939-Edition Standards

AS a result of special activity by committees of the American Society for Testing Materials, leading to the publication of the triennial *ASTM Book of Standards* which will be issued in December of this year, many new editions of standards sponsored by the ASTM have been submitted to the American Standards Association and approved by the ASA. The work of the committees brought about revisions in the following standards to bring them up-to-date with new industrial and technical developments:

- Specifications for Gypsum Plasters, American Standard (A49.3-1939)
- Specifications for Copper-Base-Alloy Forging Rods, Bars, and Shapes, American Tentative Standard (H7-1939)
- Specifications for Copper Water Tube, American Standard (H23.1-1939)
- General Methods of Testing Woven Textile Fabrics, American Standard (L5-1939)
- Methods of Test for Specific Gravity of Pigments, American Standard (K41-1939)
- Specifications for Commercial Para Red, American Standard (K31-1939)
- Specifications for Prussian Blue, American Standard (K29-1939)
- Methods of Routine Analysis of White Pigments, American Standard (K15-1939)
- Specifications for Zinc Oxide, American Standard (K22-1939)
- Specifications for Red Lead, American Standard (K24-1939)
- Specifications for Titanium Dioxide Pigments, American Standard (K45-1939) (This is a con-

- solidation of American Standards K38-1937, K39-1937, K40-1937, which have been withdrawn)
- Specifications for Steel for Bridges and Buildings, American Standard (G24-1939) (Consolidation of American Standards G18-1936 and G19-1936, which have been withdrawn)
- Specifications for Uncoated Wrought-Iron Sheets, American Standard (G23-1939)
- Specifications for Structural Rivet Steel, American Standard (G21-1939)
- Specifications for Mild Steel Plated, American Standard (G20-1939)
- Specifications for Forged or Rolled Steel Pipe Flanges for High-Temperature Service, American Standard (G17.3-1939)
- Specifications for Alloy-Steel Bolting Material for High-Temperature Service, American Standard (G17.2-1939)
- Specifications for Billet-Steel Concrete Reinforcement Bars, American Standard (A50.1-1939)

The American Standard Methods of Routine Analysis of Titanium Pigments (K43-1937) was withdrawn by the American Standards Association at the request of the American Society for Testing Materials.

Copies of the new editions of these standards will be available from the American Standards Association, 29 West 39 Street, New York, and from the American Society for Testing Materials, 260 S. Broad Street, Philadelphia, at 25 cents each. Twenty per cent discount is available to ASA Members when approved American Standards are purchased from the ASA office.

Analysis of Labeling Questionnaire Available from Consumers Project

Manufacturers, consumers, and retailers answered questions recently concerning the specific items of information they would want on labels for 12 different types of products in reply to a questionnaire sent out by the National Retailer-Relations Council. Their preferences and comments have just been analyzed by S. P. Kaidanovsky and George W. Hervey of the Consumer Standards Project, with the help of a WPA project. The analysis shows which items each of the three groups believes would be most important on labels for 122 classes of commodities—blankets, mattresses, cotton sheets, terry towels, kitchen knives, window shades, men's hosiery, men's shirts, woven piece goods, women's hosiery, slips and petticoats, and women's wash dresses.

Approximately 12 per cent of the manufactur-

ers, 20 per cent of the consumers, and 18 per cent of the retailers who were asked to indicate their relative preferences for the labeling items listed in the questionnaire sent in their replies.

The analysis of the replies contains two tables for each type of product, one showing the items regarded as desirable by a majority of those replying in each group; a second showing the percentages of those who listed the items as "a," "b," "c," or "d," as well as the percentages of those who failed to reply. Comments concerning the items are also included.

It is expected that the analysis will be used by a committee of the National Consumer-Retailer Council in preparing a revised manual on informative labeling.

Copies of the "Study of Informative Labeling" may be obtained from the Consumer Standards Project, Agricultural Adjustment Administration, Washington, D. C.

British Association Reports Progress On New Standards for Textiles

STANDARDS for wool, silk and rayon, piece goods, and leather are nearing completion, the Retail Trading-Standards Association of Great Britain announces in its Fourth Annual Report for 1938-39, just issued.

Standard definitions for tailoring and outfitting, for jewellery, stationery and fancy goods are also being prepared.

The Retail Trading-Standards Association operate a testing laboratory for testing fabrics to establish their serviceability to the consumer or to determine the cause of complaints. The Association also checks the advertisements of its members to prevent false claims for merchandise. In many cases, the Association reports, retailers have withdrawn advertisements or window descriptions of merchandise when misstatements have been

called to their attention by the Association. In some cases the Association brings court action to prevent the false labeling, and such cases are prosecuted under the Merchandise Marks Act of 1887.

Other trade associations, such as the Silk Association of Great Britain, the Irish Linen Guild, and the National Association of Outfitters, are cooperating with the Retail Trading-Standards Association, and the Association itself has representatives on the Committee on Standardization of Textiles of the Textile Institute, as well as technical committees of several other organizations working on standards. It cooperates closely with the British Standards Institution and makes use of standards approved by the BSI wherever they apply.

ASA Receives Newly Published Government Specifications

New Federal specifications, recently promulgated by the Director of Procurement for the use of all departments and establishments of the Federal Government, have been received by the American Standards Association. The specifications just received are:

Aluminum-Alloy (AL-52) (Aluminum-Magnesium-Chromium); Plates, Sheets, and Strips QQ-A-318
Boxes and Outlet-Fittings, Floor; (For) Rigid-Steel-Conduit and Electric-Metallic-Tubing (Steel) W-B-616
Brushes; Sanitary or Toilet H-B-481
Cans; Oil (Typewriter) RR-C-87
Dates; Unpitted Y-D-126
Dispensers; Soap FF-D-396a
Lamps; Electric, Incandescent, Miniature, Tungsten-Filament W-L-111b
Shields; Erasing GG-S-321

These specifications are available from the Superintendent of Documents, Government Printing Office, Washington, D. C., at five cents each.

German Basic Standards Issued in Eighth Edition

The eighth edition of Handbook No. 1, Basic Standards, containing reproductions of German standards with a wide application in industry, has been published by the German national standardizing body (Deutscher Normenausschuss).

Among the subjects covered, for example, are

drawings and drafting room practice, graphic presentation, standard diameters, screw threads, and fits between cylindrical parts. The book does not contain all of the DIN standards on each of these subjects but presents a review of the basic data in each field.

Copies can be ordered through the American Standards Association at \$3.50, or may be borrowed by ASA members.

Lumber Manufacturers Start Grade Marking of Softwoods

Grade marking of Northeastern softwoods went into effect under the sponsorship of the Northeastern Lumber Manufacturers Association starting September 1. The species to be marked are Norway pine, Eastern spruce, Northern white pine, and Eastern hemlock.

Five gradings for Norway pine and Northern white pine have been adopted and three for Eastern spruce and Eastern hemlock. The Norway and Northern pine will be graded as D Select and Better, No. 1 Common, No. 2 Common, No. 3 Common, and No. 4 Common. Eastern spruce will be stamped "Selected Merchantable," No. 1 and No. 2. The Eastern hemlock grades are "Merchantable," No. 1, and No. 2.

Licensed association member mills and official association inspectors are doing the grading, and a standard license agreement must be entered into between certified member mills and the Northeastern Lumber Manufacturers Association.

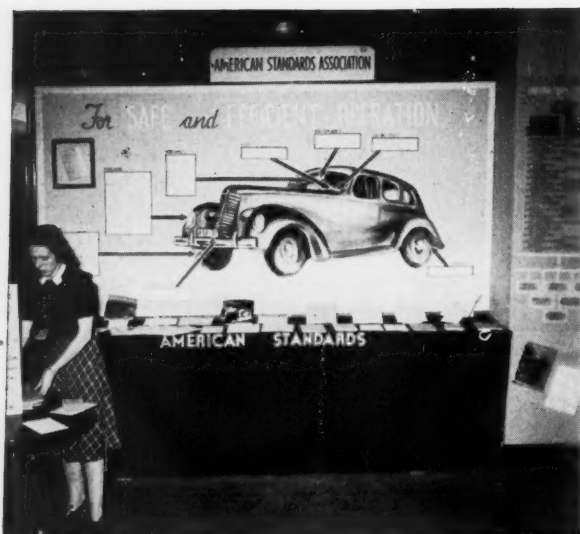


Photo by Leslie Peat

The American Standards Association At the 1939 Automobile Show

Some 40 to 50 visitors with a special interest in standardization stopped each day to inquire about the work of the American Standards Association at the ASA exhibit at the National Automobile Show October 15-22. The ASA booth (above) tied in the work of the ASA with the Automobile Show through the new American Standard Inspection Requirements for Motor Vehicles and the ASA Highway Traffic Standards Committee. A large drawing of an automobile called attention to the automobile parts covered by the inspection requirements, and a spotlight played on the standard itself. As a result of the booth, 240 copies of the new inspection code were sold, in addition to orders for many of the other standards displayed.

Fleet operators, state officials, and college and high school teachers and students, showed special interest in the booth and in the work of the ASA, as well as librarians who asked help in collecting material to start safety libraries in their own organizations, and visitors from other countries who wanted to know how the work of the ASA ties in with standardization in their own countries.

ASME Proposes Test Code for Dust-Separating Apparatus

A proposed test code for dust-separating apparatus, prepared by a committee appointed by the Power Test Codes Committee of the American Society of Mechanical Engineers, will be given a public hearing for comment and criticism De-

cember 4. The code is intended to meet an increasing need for removing the solid particles from the flue gas, brought into recent prominence through the wide adoption of the pulverized-fuel method of firing and the increase in rate of combustion in modern stoker-fired steam-generating units. Before the preparation of the proposed ASME standard test code no generally recognized method was available for determining the adequacy of dust-separating apparatus when installed in the power plant.

The term "dust-separating apparatus" applies to all devices used for separating gas-borne solid particles from the medium in which they are carried. The code provides tests for all types of dust-separating apparatus to be installed for use with solid-fuel-fired furnaces, but is not applicable to devices used in cleaning air for ventilation.

Any one interested is invited to attend the hearing, at 4:30 p.m. in the Bellevue-Stratford Hotel, Philadelphia, December 4. Copies of the proposed code may be obtained from the American Society of Mechanical Engineers, 29 West 39 Street, New York, without charge. The ASME will welcome suggestions for corrections or additions to the draft.

War Speeds Standardization Of German Machine Tools

"To relieve the pressure upon the German machine-tool industry, standardization of most of these tools is under consideration, the Commerce Department said today. The domestic demand alone has taxed the capacity of the industry to the limit.

"Virtually all possibilities afforded by plant extensions, modernization of equipment, and organization measures have been exhausted and it is difficult to procure additional skilled labor.

"At the present time the delivery terms for nonpreferential domestic orders received by the German machine-tool industry are two years in the case of specially designed machines, and one year for standard equipment."—*New York Times*, September 9.

Daniel T. Webster

Daniel T. Webster, representative of the Associated General Contractors of America on the Building Code Correlating Committee of the American Standards Association, died September 24 at the age of 62 years. Mr. Webster was vice-president of Vermilya-Brown Company, contractors and builders, New York.

ASA Standards Activities

EACH month this space will be assigned to the listing of new projects, new standards, drafts of standards submitted to the American Standards Association for approval, or drafts not yet submitted but which are now being considered by ASA committees.

Standards Approved Since Publication of Our October Issue

(The large number of standards approved and under consideration makes it impossible to list in this issue all the standards approved since the last Indexed List of Standards, February 1. The September issue lists all standards approved from February 1 up to the publication of that issue.

(Where price is not shown below, copies of standards were not available at time of publication. Orders will be received by the ASA and filled when copies become available.)

- Copper Water Tube, American Standard Specifications (Revision of H23.1-1934) H23.1-1939
 - White Pigments, American Standard Methods of Routine Analysis (Revision of K15-1933) K15-1939
 - Zinc Oxide, American Standard Specifications (Revision of K22-1937) K22-1939
 - Red Lead, American Standard Specifications (Revision of K24-1937) K24-1939
 - Prussian Blue, American Standard Specifications (Revision of K29-1937) K29-1939
 - Commercial Para Red, American Standard Specifications (Revision of 31-1937) K31-1939
 - Titanium Dioxide Pigments, American Standard Specifications K45-1939 (Consolidation of Specifications for Titanium Barium Pigment, K38-1937; Specifications for Titanium Calcium Pigment, K39-1937; and Specifications for Titanium Dioxide, K40-1937).
 - Specific Gravity of Pigments, American Standard Methods of Test (Revision of K41-1937) K41-1939
 - Definitions for Varieties of Bituminous and Subbituminous Coals, American Standard M20.4-1939
- Approved Standards Available Since Publication of Our October Issue**
- Manual of Accident Prevention in Construction, American Recommended Practice (Revision of A10-1934) A10.1-1939 \$2.00
 - Cloud and Pour Points, American Standard Method of Test (Revision of Z11.5-1935) Z11.5-1939 25¢
 - Distillation of Natural Gasoline, American Standard Method of Test (Revision of Z11.11-1932) Z11.11-1939 25¢
 - Sulfur in Petroleum Oils by Bomb Method, American Standard Method of Test (Revision of Z11.13-1934) Z11.13-1939 25¢
 - Thermal Value of Fuel Oil, American Standard Method of Test (Revision of Z11.14-1928) Z11.14-1939 25¢
 - Burning Quality of Kerosene Oils, American Standard Method of Test (Revision of Z11.17-1936) Z11.17-1939 25¢

- Carbon Residue of Petroleum Products (Conradson Carbon Residue), American Standard Method of Test (Revision of Z11.25-1936) Z11.25-1939 25¢
- Definitions of Terms Relating to Petroleum, American Standard (Advancement to standard of tentative standard Z11.28-1936) Z11.28-1939 25¢
- Gravity of Petroleum and Petroleum Products by Means of the Hydrometer, American Standard Method of Test (Revision of Z11.31-1936) Z11.31-1939 25¢
- Knock Characteristics of Motor Fuels, American Standard Method of Test (Advancement to standard of tentative standard Z11.37-1938) Z11.37-1939 25¢
- Color of Lubricating Oils, American Tentative Standard Method of Test (Revision of Z11.34-1935) Z11.34-1939 25¢

Standards Now Being Considered by Standards Council for ASA Approval

- Taps, Cut and Ground Thread (Revision of B5.4-1930)
- Involute Splines—Side Bearing B5.15
- Round Unslotted Head Bolts (Revision of B18.5-1928)
- Welded Wrought-Iron Pipe (Revision of R36.2-1939; ASTM A 72-38)
- Lap-Welded and Seamless Steel Pipe for High-Temperature Service (Revision of B36.3-1936; ASTM A 106-36)
- Electric-Fusion-Welded Steel Pipe (Sizes 30 in. and over) (Revision of B36.4-1936; ASTM A 134-36)
- Electric-Fusion-Welded Steel Pipe (Sizes 8 in. to but not including 30 in.) (Revision of B36.9-1936; ASTM A 139-36)
- Specifications for Weather-Resistant Saturants and Finishes for Rubber-Insulated Wire and Cable C8.19
- Specifications for Heavy Wall Enamelled Round Copper Magnet Wire C8.20
- Proposed American Recommended Practice for the Use of Explosives in Anthracite Mines M27
- Safety Code for the Prevention of Dust Explosions in the Manufacture of Aluminum Bronze Powder
- Safety Code for the Prevention of Dust Explosions in Pulverizing Systems for Sugar and Cocoa (Revision of Z12b-1931)
- Safety Code for Coal Pneumatic Cleaning Plants (Revision of Z12f-1930)
- Safety Code for Prevention of Dust Explosions in Wood Flour Manufacturing Establishments (Revision of Z12g-1930)
- Safety Code for the Prevention of Dust Ignitions in Spice Grinding Plants (Revision of Z12h-1931)
- Safety Code for the Use of Inert Gas for Fire and Explosion Prevention (Revision of Z12i-1931)
- Safety Code for Installation of Pulverized Fuel Systems (Revision of Z12.1-1935)
- Safety Code for the Prevention of Dust Explosions in Starch Factories (Revision of Z12.2-1935)
- Safety Code for the Prevention of Dust Explosions in Flour and Feed Mills (Revision of Z12.3-1935)
- Safety Code for Prevention of Dust Explosions in Woodworking Plants (Revision of Z12.5-1935)
- Specifications for Sieves for Testing Purposes Z23

Standards Withdrawn by ASA

- Methods of Routine Analysis of Titanium Pigments (K43-1937)



Courtesy National Bureau of Standards

FIRE PROTECTION

American Standard Regulations for Air Conditioning and Blower Systems

include requirements for safe installation of air-conditioning, warm-air heating or cooling, and ventilating systems (Z33.2-1939) and regulations for the installation of blower and exhaust systems for dust, stock, and vapor removal (Z33.1-1938)

15[¢]

(20% discount to ASA Members)

Prepared by the National Fire Protection
Association; Approved by the American
Standards Association

American Standards Association

29 West 39th Street

New York